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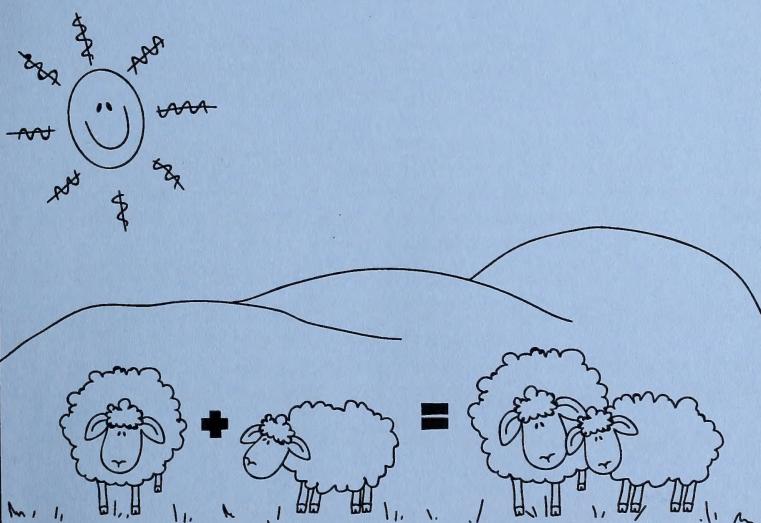


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GRADE THREE MATHEMATICS: MODULE 1

ADDITION AND SUBTRACTION

Home Instructor's Guide: Days 10-18
and
Assignment Booklet 1B



Learning
Technologies
Branch

Alberta
LEARNING

Grade Three Mathematics
Module 1: Addition and Subtraction
Home Instructor's Guide: Days 10–18 and Assignment Booklet 1B
Learning Technologies Branch
ISBN 0-7741-2220-X

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Teachers	✓
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DAILY SUMMARY

DAY 10: Some students find it difficult to choose the right operation when they are presented with a problem-solving situation. This lesson discusses key words that can give clues to what operation the student must use. The student does several exercises that involve making a decision about the operation. Writing subtraction and addition problems is also practised. Many math software programs with problem solving are available and provide a fun way to practice. Mathville Mindway: Math Problem Solving: Ages 8 to 12 is recommended. It is available in both Macintosh and Windows versions.

DAY 10: LESSON 1

Answers

1. Some words that tell you to add are as follows: in all, all together, join, sum, and more. Other responses that show combining or joining groups are also correct.
2. Some words that tell you to subtract are as follows: take away, left, how many more, difference, fewer, and go away. Other responses that show separating or comparing groups are also correct.
3. a. add b. subtract c. subtract d. add e. add

DAY 10: LESSON 2

Answers

1. a. $12 - 3 = 9$
b. $4 + 6 + 8 = 18$
c. $18 - 9 = 9$
2. The student's subtraction story should show an understanding of the subtraction process. All necessary information should be included. The student should solve the problem by writing an equation and a sentence.
3. The student's addition story should show an understanding of the addition process. All necessary information should be included. The student should solve the problem by writing an equation and a sentence.
4. a. You must find out how many cans of cat food were eaten in 2 months.
b. You must add to solve the problem.
c. $6 + 8 = 14$
d. The kittens ate 14 cans of cat food in two months.
e. The student should indicate if the answer makes sense.

5. a. You have to find out how many cards Luke has left.
b. You will subtract.
c. $14 - 9 = 5$
d. Luke has 5 cards left.
e. The student should indicate if the answer makes sense.

6. a. $15 - 8 = 7$
b. The student rode 7 kilometres more.

DAY 11: Addition of numbers with sums to 100 is reviewed. The student does not have to use regrouping (carrying) to solve the problems. The emphasis continues to be on the development of personal strategies when doing math calculations. Base tens blocks are used to review place value. Assist your student in removing and assembling the place-value mat from the Appendix. The student must have a good understanding of place value to do the regrouping activities on Day 13.

DAY 11: LESSON 1

Answers

1. 9 ones
2. 3 tens
3. 39
4. 39
5. Luke does not have enough room in his album.
6. a. 59 b. 95 c. 82 d. 77

DAY 11: LESSON 2

Answers

Each picture in the box should show the correct amount of objects, preferably grouped into tens and ones.

1. 59
2. 53

DAY 11: LESSON 3**Answers**

1. 69
2. 67
3. 79

DAY 12: Subtraction of numbers to 100 is reviewed. The student does not have to regroup (borrow) to solve the equations in this lesson. Base ten blocks and pictures are used to illustrate the subtraction process. The student is also introduced to a pencil and paper method of solving equations.

DAY 12: LESSON 1**Answers**

1. a. Sarah will need to subtract to find the answer.
 - b. $78 - 55 =$ _____
 - c. 7 tens and 8 ones
 - d. 5 tens and 5 ones
 - e. You have 23 blocks left.
 - f. Sarah would have **\$23** left. Remind the student that the amount would be stated in dollars.
2. a. 53 b. 11 c. 64 d. 12

DAY 12: LESSON 2**Answers**

1. You can now see that Sarah has **\$23** left.
2. a. The student should have circled 17. $28 - 17 = 11$
b. The student should have circled 30. $56 - 30 = 26$

DAY 12: LESSON 3**Answers**

1. 40

2. 9

3. 25

4. 18

5. 41

Timed Exercise Answers:

$$\begin{array}{r}
 3 & 9 & 7 & 8 \\
 + 9 & + 9 & + 3 & + 5 \\
 \hline
 \mathbf{12} & \mathbf{18} & \mathbf{10} & \mathbf{13}
 \end{array}$$

$$\begin{array}{r}
 9 & 6 & 8 & 7 \\
 + 6 & + 5 & + 7 & + 7 \\
 \hline
 \mathbf{15} & \mathbf{11} & \mathbf{15} & \mathbf{14}
 \end{array}$$

$$9 + 5 = \mathbf{14} \quad 6 + 3 = \mathbf{9} \quad 7 + 5 = \mathbf{12} \quad 8 + 9 = \mathbf{17}$$

$$7 + 2 = \mathbf{9} \quad 4 + 8 = \mathbf{12} \quad 6 + 6 = \mathbf{12} \quad 4 + 7 = \mathbf{11}$$

$$2 + 6 = \mathbf{8} \quad 8 + 3 = \mathbf{11} \quad 9 + 4 = \mathbf{13} \quad 5 + 5 = \mathbf{10}$$

DAY 13: Base ten blocks and the place-value mat are used to represent and regroup numbers and to add sums to 100. The pencil and paper method of regrouping is also discussed. Encourage your student to use the base ten blocks for as long as the student needs them. Manipulatives should be used any time the student has difficulty understanding a concept.

DAY 13: LESSON 1**Answers**

1. a. **5** tens and **2** ones
b. **3** tens and **7** ones
c. **9** tens and **9** ones
d. **64**
e. **70**
- 2 yes
3. 2
4. 12
5. 32 can be described as 3 tens and 2 ones or **2** tens and **12** ones.
6. Now you have **3** tens and **3** ones or **33**.
7. a. The number 61 is the same as **6** tens and **1** one or **5** tens and **11** ones. (also 4 tens and 21 ones, 3 tens and 31 ones, 2 tens and 41 ones, 1 ten and 51 ones and 61 ones)
b. The number 53 is the same as **5** tens and **3** ones or **4** tens and **13** ones. (also 3 tens and 23 ones, 2 tens and 33 ones, 1 ten and 43 ones, and 53 ones)
c. The number 25 is the same as **2** tens and **5** ones or **1** ten and **15** ones. (also 25 ones)
d. So, 5 tens and 14 is the same as **64**.
e. So, 2 tens and 12 is the same as **32**.
f. So, 6 tens and 13 is the same as **73**.

DAY 13: LESSON 2**Answers**

1. Sarah needs to add.
2. $27 + 17 =$ _____
3. 12
4. 3

5. **4** tens and **2** ones or **42**.
6. Sarah made \$**42** selling rabbits.
7. a. $54 + 18 =$ **6** tens and **12** ones or **72**.
 b. $32 + 29 =$ **5** tens and **11** ones or **61**.
 c. $46 + 34 =$ **7** tens and **10** ones or **80**.
 d. $71 + 20 =$ **9** tens and **1** ones or **91**.

DAY 13: LESSON 3

Answers

1. a. $\begin{array}{r} 1 \\ 28 \\ + 58 \\ \hline 86 \end{array}$	b. $\begin{array}{r} 1 \\ 17 \\ + 36 \\ \hline 53 \end{array}$	c. $\begin{array}{r} 1 \\ 59 \\ + 21 \\ \hline 80 \end{array}$
---	--	--

DAY 14: A method to add without using regrouping is presented. Some students find this method (adding the tens, the ones, and then the tens to the ones) easier than the traditional way of adding large numbers.

A mental math strategy for making 10s when adding is also introduced.

You can select an Extension Activity or Challenge Activity today depending on your student's needs.

DAY 14: LESSON 1

Answers

1. a. $\begin{array}{r} 37 \\ + 62 \\ \hline 99 \end{array}$	b. $\begin{array}{r} 55 \\ + 16 \\ \hline 71 \end{array}$
$\begin{array}{r} 30 \\ + 60 \\ \hline 90 \end{array}$ $\begin{array}{r} 90 \\ \longleftarrow \\ + 9 \\ \hline 99 \end{array}$	$\begin{array}{r} 50 \\ + 10 \\ \hline 60 \end{array}$ $\begin{array}{r} 60 \\ \longleftarrow \\ + 11 \\ \hline 71 \end{array}$
$\begin{array}{r} 7 \\ + 2 \\ \hline 9 \end{array}$	$\begin{array}{r} 5 \\ + 6 \\ \hline 11 \end{array}$

c.
$$\begin{array}{r}
 56 \\
 + 34 \\
 \hline
 80 \leftarrow \mathbf{80} \\
 + 10 \leftarrow \mathbf{10} \\
 \hline
 90
 \end{array}
 \quad
 \begin{array}{r}
 50 \\
 + 30 \\
 \hline
 6 \quad + 4 \\
 \hline
 \end{array}$$

d.
$$\begin{array}{r}
 70 \\
 + 18 \\
 \hline
 80 \leftarrow \mathbf{80} \\
 + 8 \leftarrow \mathbf{8} \\
 \hline
 88
 \end{array}
 \quad
 \begin{array}{r}
 70 \\
 + 10 \\
 \hline
 0
 \end{array}$$

2. The student must find out how many kilometres Luke has travelled in all.

3. The student should add the two numbers.

4. a.
$$\begin{array}{r}
 13 \\
 + 18 \\
 \hline
 31
 \end{array}
 \quad \text{or} \quad
 \begin{array}{r}
 13 \\
 + 18 \\
 \hline
 20 \leftarrow \mathbf{20} \\
 + 11 \leftarrow \mathbf{11} \\
 \hline
 31
 \end{array}
 \quad
 \begin{array}{r}
 10 \\
 + 10 \\
 \hline
 3
 \end{array}$$

b. Luke has gone 31 kilometres in all.

5. The student should indicate whether the answer makes sense to them.

DAY 14: LESSON 2

Answers

- 17
- 14
- 19
- 18
- 17
- 15

Timed Exercise Answers:

$$\begin{array}{r}
 2 \\
 + 9 \\
 \hline
 11
 \end{array}
 \quad
 \begin{array}{r}
 9 \\
 + 7 \\
 \hline
 16
 \end{array}
 \quad
 \begin{array}{r}
 5 \\
 + 3 \\
 \hline
 8
 \end{array}
 \quad
 \begin{array}{r}
 6 \\
 + 5 \\
 \hline
 11
 \end{array}$$

$$\begin{array}{r}
 9 \\
 + 4 \\
 \hline
 13
 \end{array}
 \quad
 \begin{array}{r}
 6 \\
 + 6 \\
 \hline
 12
 \end{array}
 \quad
 \begin{array}{r}
 5 \\
 + 7 \\
 \hline
 12
 \end{array}
 \quad
 \begin{array}{r}
 7 \\
 + 9 \\
 \hline
 16
 \end{array}$$

$$5 + 5 = 10 \quad 6 + 4 = 10 \quad 7 + 8 = 15 \quad 8 + 8 = 16$$

$$7 + 6 = 13 \quad 4 + 8 = 12 \quad 6 + 3 = 9 \quad 4 + 8 = 12$$

$$9 + 6 = 15 \quad 8 + 5 = 13 \quad 9 + 9 = 18 \quad 5 + 9 = 14$$

DAY 15: The use of regrouping in subtraction is reviewed. The student uses base ten blocks to practice regrouping numbers. A pencil and paper method of subtraction is also discussed.

DAY 15: LESSON 1**Answers**

1. Yes, Luke still has 70 blocks.
2. You have 26 blocks left.
3. Luke has to go **26** more miles to reach his goal.
4. no
5. yes
6. There are 18 blocks left.
7. 18
8. a. 16 b. 38 c. 43 d. 18

DAY 15: LESSON 2**Answers**

1. Yes, you need to regroup.

2. a.

Tens	Ones
3	
4	17
- 2	9
<hr/>	
1	8

b.

Tens	Ones
6	
X	11
- 4	5
<hr/>	
2	6

c.

Tens	Ones
7	4
- 7	1
<hr/>	
0	3

d.

Tens	Ones
3	
4	15
- 3	6
<hr/>	
0	9

DAY 16: Estimation and rounding are covered in this lesson. After reviewing rounding to the nearest ten, the student uses estimation skills to check answers in addition and subtraction problems.

DAY 16: LESSON 1**Answers**

1. The 7 is in the ones place.

2. a. 50

b. 80

c. 90

d. 20

e. 60

f. 80

DAY 16: LESSON 2**Answers**

1. a. 40

b. 80

c. 90

d. 90

The exact answer to the question is 81, so yes, the estimate was a close one.

2. a.
$$\begin{array}{r}
 65 \\
 + 32 \\
 \hline
 97
 \end{array}
 \begin{array}{l}
 \xrightarrow{\text{round to}} 70 \\
 \xrightarrow{\text{round to}} + 30 \\
 \xrightarrow{\text{estimated sum}} 100
 \end{array}$$

b.
$$\begin{array}{r}
 43 \\
 + 39 \\
 \hline
 82
 \end{array}
 \begin{array}{l}
 \xrightarrow{\text{round to}} 40 \\
 \xrightarrow{\text{round to}} + 40 \\
 \xrightarrow{\text{estimated sum}} 80
 \end{array}$$

3. a.
$$\begin{array}{r}
 75 \\
 - 49 \\
 \hline
 26
 \end{array}
 \begin{array}{l}
 \xrightarrow{\text{round to}} 80 \\
 \xrightarrow{\text{round to}} - 50 \\
 \xrightarrow{\text{estimated difference}} 30
 \end{array}$$

b.
$$\begin{array}{r}
 94 \\
 - 26 \\
 \hline
 68
 \end{array}
 \begin{array}{l}
 \xrightarrow{\text{round to}} 90 \\
 \xrightarrow{\text{round to}} - 30 \\
 \xrightarrow{\text{estimated difference}} 60
 \end{array}$$

c.
$$\begin{array}{r}
 38 \\
 - 12 \\
 \hline
 26
 \end{array}
 \begin{array}{l}
 \xrightarrow{\text{round to}} 40 \\
 \xrightarrow{\text{round to}} - 10 \\
 \xrightarrow{\text{estimated difference}} 30
 \end{array}$$

4. a.
$$\begin{array}{r}
 61 \\
 + 32 \\
 \hline
 93
 \end{array}
 \quad \text{estimated answer: } \mathbf{90}$$

b.
$$\begin{array}{r}
 43 \\
 + 28 \\
 \hline
 71
 \end{array}
 \quad \text{estimated answer: } \mathbf{70}$$

c.
$$\begin{array}{r}
 79 \\
 - 68 \\
 \hline
 11
 \end{array}
 \quad \text{estimated answer: } \mathbf{10}$$

DAY 16: LESSON 3**Answers**

1. The student has to find out whether Sarah should choose the 80 cm or the 90 cm board.
2. a. The student must add the two measured spaces.
b. No, the student does not need an exact answer.
3. $40 + 50 = 90$
4. Sarah should choose the 90 cm board because the 80 cm board is too short to patch both spaces.
5. The student should indicate if his or her answer makes sense.

DAY 17: The student practises using three different methods to verify answers—inverse operations, a calculator, and estimation. The student will use these three methods to check answers throughout the Grade Three Mathematics course.

DAY 17: LESSON 1**Answers**

- 1 and 2. Work can be checked by doing the opposite (inverse) operation or using a calculator.
3. Calculators are most useful for long or complicated problems.
4. a. 90×91 b. $84 \checkmark$ c. 102×99

DAY 17: LESSON 2**Answers**

1. a. 57, no, no b. 25, yes, yes c. 53, no, no d. 72, yes, yes
2. a. 73, no, no b. 38, no, no c. 91, yes, yes

DAY 17: LESSON 3**Answers**

1. The student has to find out if Luke has the right amount of money for the chocolate bars.
2. The student has to add.
3. $43 + 37 = 80$
4. a. $40 + 40 = 80$
b. No, Luke does not have the right amount. When 43 is added to 37, the answer is 80. The estimation also shows the answer will be \$80.

DAY 18: The concepts that were discussed in this module are reviewed in Assignment Booklet 1B. Some multiple-choice questions are included to familiarize the student with this style of questioning. Refer to this review as a study guide for final achievement tests. Encourage the student to review the pertinent sections in the Student Module Booklet if he or she has difficulty with the review questions. When the student finishes the assignment for Day 18, read the Summary in the Student Module Booklet. Then have your student complete the Student Checklist in the Assignment Booklet. Go over the responses and discuss them with the student. Then complete the Home Instructor's Checklist. Include any information you think may be helpful for the teacher to know.

Submit Assignment Booklet 1B for marking.

ASSIGNMENT BOOKLET 1B

Grade Three Mathematics

Module 1: Days 10–18

Home Instructor's Comments and Questions

Home Instructor's Signature

FOR SCHOOL USE ONLY

Assigned Teacher:

Date Assignment Received:

Grading:

Additional Information:

FOR HOME INSTRUCTOR USE (if label is missing or incorrect)

Student File Number:

Date Submitted:

Apply Module Label Here

Name

Address

Postal Code

*Please verify that preprinted label is for
correct course and module.*

Teacher's Comments

Teacher's Signature

Home Instructor: Keep this sheet when it is returned to you as a record of the student's progress.

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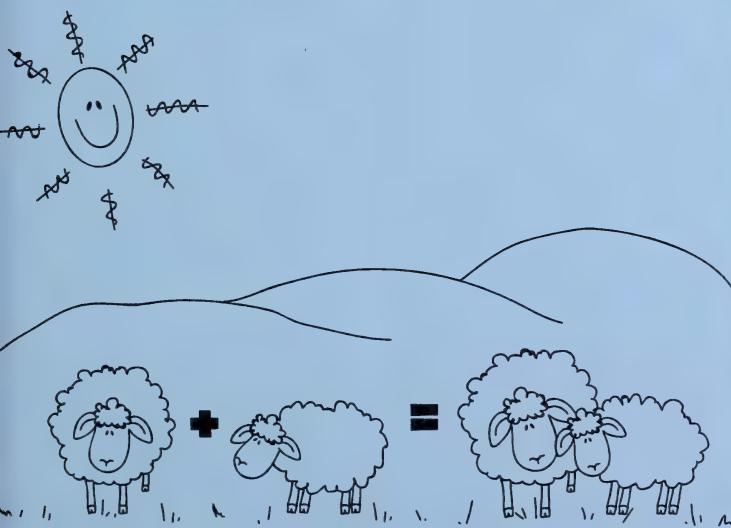
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GRADE THREE MATHEMATICS: MODULE 1

ADDITION AND SUBTRACTION

Assignment Booklet 1B



Learning
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LEARNING

Grade Three Mathematics
Module 1: Addition and Subtraction
Assignment Booklet 1B
Learning Technologies Branch

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Students	✓
Teachers	✓
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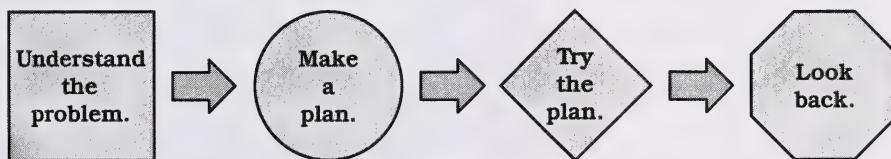
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Write **add** or **subtract** to show the operation suitable to the following problems.

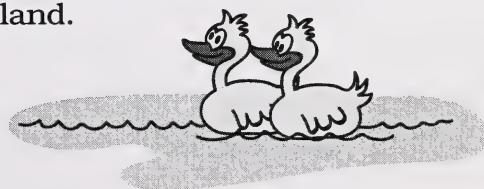
- How much taller is your home instructor than you are? _____
- How many pencils and crayons have you altogether? _____
- How many birds are left after some flew away? _____

Solve each problem below. Write an equation and a sentence to show your answer. Use the steps here to help you.



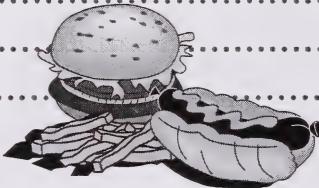
- Dan had 12 candies. His friend had 5. How many more candies does Dan have?

- There are 9 ducks on the pond. Then 5 more land. How many ducks are there in all?



3. Use the menu to solve the problems. Write a number sentence to show how you know. Then write a word sentence to answer the question.

LUNCH MENU	COST
Club House Sandwich.....	\$7
French Fries.....	\$3
Hamburger.....	\$6
Steak.....	\$12
Poutine.....	\$4
Hot Dog.....	\$2



¹

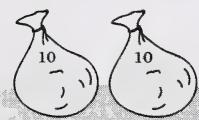
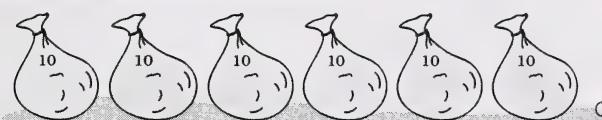
- a. How much would it cost to have a hot dog and poutine?

- b. How much more does a steak cost than a club house sandwich?

- c. If you had \$15 and bought a hamburger, how much change would you get?

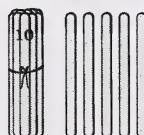
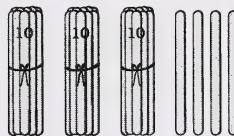
1. Use the pictures to help you solve the equations.

a.



$$61 + 20 = \underline{\hspace{2cm}}$$

b.



$$34 + 15 = \underline{\hspace{2cm}}$$

c.



$$29 + 10 = \underline{\hspace{2cm}}$$

2. Solve these number sentences using a strategy you have learned.

a. $35 + 41 =$ _____

b. $52 + 24 =$ _____

c. $61 + 18 =$ _____

d. 27

$+ 11$

e. 44

$+ 23$

f. 72

$+ 10$

3. Journal Entry

What strategy do you use most often to solve adding questions that have large numbers?

4. Write a number sentence, and solve it for each question. Use your favourite strategies. Then write a sentence to show your answer.



- a. Nguyen bought 24 cupcakes and 12 fritters. How many items does he have in all?

- b. Luke's Mom bought 16 squares and 12 cookies. How many goodies did she buy altogether?

- c. At the end of the day, there were 46 doughnuts and 30 bagels left. How many items were left?

1. Draw a picture to show these subtraction equations. Draw a circle to show which ones you are taking away.

a.

$39 - 23 = \underline{\quad}$

b.

$61 - 40 = \underline{\quad}$

2. Solve these equations using your favourite strategies.

a. 46
 $\underline{- 26}$

b. 59
 $\underline{- 14}$

c. 32
 $\underline{- 30}$

d. 66
 $\underline{- 52}$

e. $35 - 23 =$ _____

f. $99 - 56 =$ _____

g. $54 - 10 =$ _____

h. $78 - 24 =$ _____

3. Solve these equations. Be careful. Some are addition and some are subtraction.

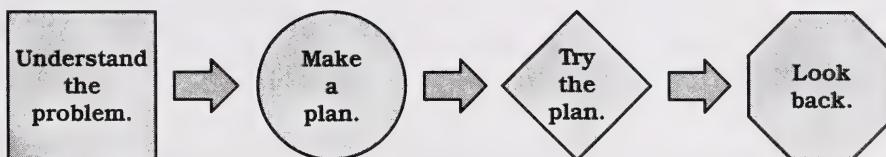
a. 34
 $\underline{+ 12}$

b. 61
 $\underline{- 40}$

c. 29
 $\underline{- 15}$

d. 56
 $\underline{+ 32}$

4. Solve the following problems using the four-step problem solving process. You can do some steps in your head, but you need to show an equation and write a complete sentence to tell the answer.



a.



Luke is 97 centimetres tall. His little sister is 54 centimetres tall. How much taller is Luke than his sister?

b.



Luke's dog is 20 centimetres shorter than his sister. How tall is Luke's dog?

1. Write each number another way. Use base ten blocks if you need to.

a. 56 is the same as _____ tens and _____ ones.

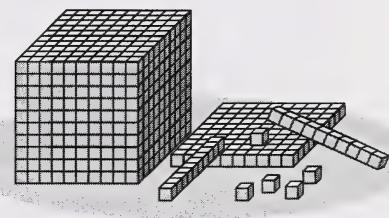
b. 98 is the same as _____ tens and _____ ones.

c. 3 tens and 4 ones is the same as _____.

d. 5 tens and 15 ones is the same as _____.

e. 7 tens and 13 ones is the same as _____.

f. 2 tens and 10 ones is the same as _____.



2. Solve the equations. Add the ones first. Remember to regroup the ones if there are 10 or more ones.

a.

Tens	Ones
3	9
+ 2	3

b.

Tens	Ones
2	6
+ 5	4

c.

Tens	Ones
1 + 7 _____	9 2

d.

Tens	Ones
4 + 2 _____	4 6

e.

Tens	Ones
8 + _____	7 8

f.

Tens	Ones
6 + 1 _____	2 9

3. Use the information below to answer the questions. Write a number sentence and solve it to show how you know the answer. Show your work, and write a complete sentence to tell the answer.

A park near Luke's home has a variety of trees. For a science project, Luke counted the trees and made these notes.



Type of Tree	Number
Poplar	65
Apple	32
Pine	27
Spruce	19
○	
○	
○	
○	

- a. How many spruce and pine trees are there altogether?

b. How many more poplar trees than apple trees are there?

c. How many poplar and pine trees are there in all?

4. Journal Entry

Did you have any trouble representing or regrouping numbers? Explain why or why not.

1. Add these numbers without regrouping. Show your work.

a.
$$\begin{array}{r} 45 \\ + 29 \\ \hline \end{array}$$

\leftarrow

$$\begin{array}{r} 40 \\ + 20 \\ \hline \end{array}$$

\leftarrow

$$\begin{array}{r} 5 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} + \\ \hline \end{array}$$
 \leftarrow

b.
$$\begin{array}{r} 37 \\ + 56 \\ \hline \end{array}$$

\leftarrow

$$\begin{array}{r} 30 \\ + 50 \\ \hline \end{array}$$

\leftarrow

$$\begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$$

2. Solve these equations, using your favourite method.

a.
$$\begin{array}{r} 35 \\ + 16 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 59 \\ + 17 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 64 \\ + 28 \\ \hline \end{array}$$

3. Look for combinations that equal ten to help you add these numbers.

a. $5 + 3 + 7 =$ _____

b. $6 + 4 + 9 =$ _____

c. $5 + 6 + 5 =$ _____

d. $8 + 7 + 2 =$ _____

e. $9 + 1 + 9 =$ _____

f. $8 + 2 + 5 + 5 =$ _____

Look at each subtraction question. Will you need to regroup to find the answer?

Answer **Yes** or **No**.

1. a. 54 Will you need to regroup? _____

$$\underline{- 35}$$

b. 26 Will you need to regroup? _____

$$\underline{- 15}$$

c. 74 Will you need to regroup? _____

$$\underline{- 58}$$

2. Solve the equations. Use your base ten blocks or the pencil and paper method of regrouping.

a.

Tens	Ones
8 - 2 _____	2 4 _____

b.

Tens	Ones
3 - 1 _____	1 6 _____

c.

Tens	Ones
2 - 1 _____	0 3

d.

Tens	Ones
8 - 5 _____	5 7

3.

Each day after Luke trains for his race, he stops for a treat. At the beginning of the week he had 99 cents.

On Monday, he bought a bubble gum for 5 cents.

On Tuesday, he bought a lemonade for 17 cents.

On Wednesday, he bought a licorice for 23 cents.

On Thursday, he bought a slush for 25 cents.

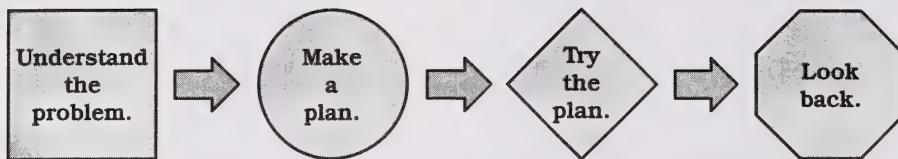
On Friday, he bought some penny candy for 15 cents.

How much money does he have left?



Show your work, and write a complete sentence to tell the answer. (Hint: There is more than one way to solve this problem.)

Remember:



4. Journal Entry

What steps did you use to solve question 3?

1. Round the numbers to the nearest 10.

a. 68 _____

b. 43 _____

c. 75 _____

d. 33 _____

e. 89 _____

2. Estimate each answer by rounding the numbers to the nearest 10. Then find the exact answer.

a. 65 estimated answer: _____

$$\begin{array}{r} + 22 \\ \hline \end{array}$$

b. 47 estimated answer: _____

$$\begin{array}{r} + 30 \\ \hline \end{array}$$

c. 74 estimated answer: _____

$$\begin{array}{r} + 17 \\ \hline \end{array}$$

d. 58 estimated answer: _____

$$\begin{array}{r} - 25 \\ \hline \end{array}$$

e. 81 estimated answer: _____

$$\begin{array}{r} - 12 \\ \hline \end{array}$$

f. $\begin{array}{r} 62 \\ - 43 \\ \hline \end{array}$ estimated answer: _____

3. a. Sarah's mom gave her \$90 to buy some fall clothes. The list tells the prices of the things Sarah would like to buy. Round the prices in the list to the nearest ten.

Sarah's List

Item	Exact Price	Rounded Price
jeans	\$45	\$_____
sweatshirt	\$29	\$_____
sweater	\$35	\$_____
quilted vest	\$52	\$_____
fall jacket	\$75	\$_____
hat and mitts	\$12	\$_____

- b. Using the rounded prices, could Sarah buy the jeans and the vest? Show your work.
-
- c. Using the rounded prices, could Sarah buy the jacket and the hat and mitts? Show your work.
-
- d. Using the rounded prices, could Sarah buy the sweatshirt, the sweater, and the hat and mitts? Show your work.
-

4. Use a catalogue or sales fliers to make a list of at least five items less than \$50 that you would like to buy. Write down the dollar cost. (Don't worry about the cents.) Your list should look like Sarah's list, except with your name. It should have the exact prices (without the cents) and the rounded prices to the nearest \$10.

Item	Exact Price	Rounded Price

If I had \$80 to spend, I would buy _____

1. Check these subtraction questions by adding. Show your work. Mark the answer with a check mark (✓) if it is correct or with an ex (✗) if it is incorrect.

a. 67

$$\begin{array}{r} - 49 \\ \hline 28 \end{array}$$

b. 84

$$\begin{array}{r} - 36 \\ \hline 48 \end{array}$$

c. 39

$$\begin{array}{r} - 17 \\ \hline 12 \end{array}$$

2. Check these adding questions by subtracting. Show your work. Mark the answer with a check mark (✓) if it is correct or with an ex (✗) if it is incorrect.

a. 43

$$\begin{array}{r} + 38 \\ \hline 91 \end{array}$$

b. 78

$$\begin{array}{r} + 18 \\ \hline 96 \end{array}$$

c. 59

$$\begin{array}{r} + 28 \\ \hline 87 \end{array}$$

3. Circle the correct answer in each pair. Use rounding to show how you know.

a.
$$\begin{array}{r} 49 \\ + 39 \\ \hline 68 \end{array}$$

$$\begin{array}{r} 49 \\ + 39 \\ \hline 88 \end{array}$$

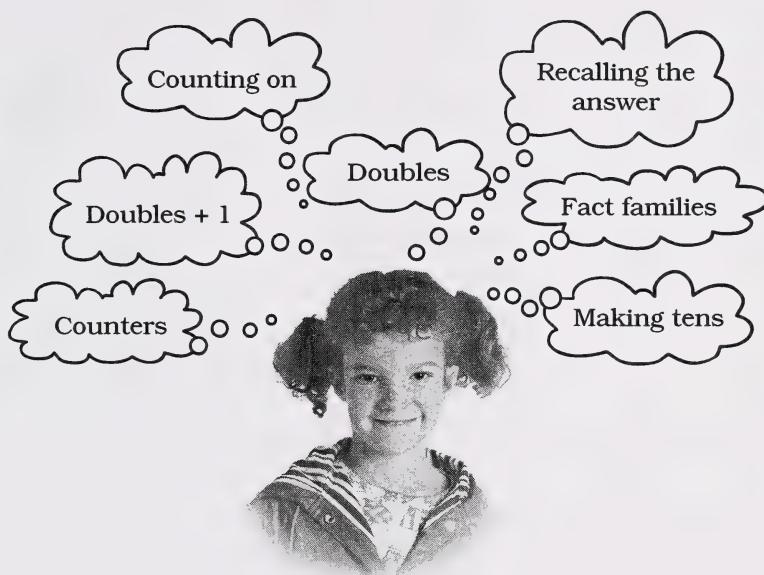
b.
$$\begin{array}{r} 73 \\ - 18 \\ \hline 55 \end{array}$$

$$\begin{array}{r} 73 \\ - 18 \\ \hline 65 \end{array}$$

c.
$$\begin{array}{r} 22 \\ + 38 \\ \hline 71 \end{array}$$

$$\begin{array}{r} 22 \\ + 38 \\ \hline 60 \end{array}$$

1. Solve these addition and subtraction questions using your favourite strategies.



1

a. $8 + 5 + 5 =$

b. $6 + 4 + 3 =$

c. $5 + 3 + 7 =$

d. $15 - 8 =$

e. $18 - 9 =$

f. $12 - 3 =$

g. 54

$$\underline{+ 26}$$

h. 19

$$\underline{+ 48}$$

i. 41

$$\underline{+ 27}$$

j. 16

$$\underline{- 12}$$

k. 31

$$\underline{- 14}$$

l. 72

$$\underline{- 28}$$

¹ Rubberball Productions/Getty Images

2. Use what you know about fact families to complete the questions.

a. $6 + 7 = 13$ so $13 - 6 = \underline{\hspace{2cm}}$

b. $16 - 7 = 9$ so $9 + 7 = \underline{\hspace{2cm}}$

c. $8 + 8 = 16$ so $16 - 8 = \underline{\hspace{2cm}}$

d. $14 - 5 = 9$ so $9 + \underline{\hspace{2cm}} = 14$

e. $17 - 8 = 9$ so $8 + \underline{\hspace{2cm}} = 17$

f. $6 + 8 = 14$ so $14 - \underline{\hspace{2cm}} = 8$

3. Write the four problem-solving steps.

Step 1: _____

Step 2: _____

Step 3: _____

Step 4: _____

4. Solve the following problem using the four steps of problem solving. Show all your work, and write the answer in a complete sentence.



1

Aziz was allowed to watch 90 minutes of television a week. He has already watched one 15-minute program and 1-hour program. How many more minutes of television can he watch?

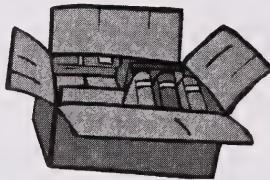
5. Sarah's family had a garage sale. Sarah wanted to sell the items below.



\$4.00



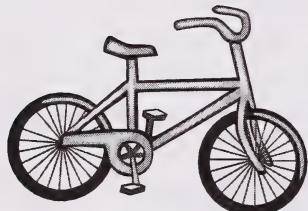
\$15.00



\$12.00



\$22.00



\$52.00



\$37.00



\$2.00

Fill in the circle that shows the correct answer to each of the following questions. Show your work.

- a. How much money would Sarah get if she sold the bicycle, the teddy bear and the t-shirt?

- \$55
- \$57
- \$58
- \$60

- b. **Estimate** how much Sarah would make if she sold the books, the rollerblades, and the skates.

- about \$80
- about \$70
- about \$60
- about \$50

6. At the end of the garage sale Sarah had \$89. When she went to town, she bought a new pair of rollerblades for \$75. To find out how much she has left you would
- add
 - subtract
 - multiply
 - divide
7. Sarah's brother made \$64 at the garage sale. Sarah made \$89. How much more did Sarah make than her brother?
- \$35
 - \$20
 - \$25
 - \$143

Challenge Question

This is an optional question you may want to try for fun.

1. a. Which items did Sarah sell to make \$89?

- skates, roller blades, teddy bear, t-shirt
- bicycle, video game, books
- roller blades, bicycle
- bicycle, skates, books

- b. Are there any other combinations that add up to \$89? _____
- _____

Ask your home instructor to time you for 2 minutes. Do as many questions as you can. Write how many you completed.

Timed exercise: 2 minutes

$4 + 5 = \underline{\hspace{2cm}}$ $6 + 5 = \underline{\hspace{2cm}}$ $4 + 9 = \underline{\hspace{2cm}}$ $2 + 8 = \underline{\hspace{2cm}}$

$8 + 5 = \underline{\hspace{2cm}}$ $7 + 8 = \underline{\hspace{2cm}}$ $3 + 6 = \underline{\hspace{2cm}}$ $7 + 9 = \underline{\hspace{2cm}}$

$8 + 6 = \underline{\hspace{2cm}}$ $9 + 9 = \underline{\hspace{2cm}}$ $9 + 5 = \underline{\hspace{2cm}}$ $3 + 9 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 6 \\ + 8 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ + 7 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ + 6 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$$

Number completed	
Number correct	

STUDENT'S CHECKLIST
MODULE 1: DAYS 10 TO 18

I can . . .	Put a check mark beside the things you can do.
add and subtract numbers to 100 that do not require regrouping	
use regrouping to solve addition and subtraction questions	
use estimation to tell if an answer is reasonable	
choose the correct operation to solve a problem	

STUDENT'S COMMENTS

Did you have difficulty with any of the activities in Days 10 to 18? Explain.

An activity I enjoyed was _____

HOME INSTRUCTOR'S CHECKLIST

Check **yes** or **not yet** for each question.

Can the student do the following?

- use manipulatives and diagrams to show addition and subtraction to 100 yes not yet
- add and subtract numbers to 100 that do not require regrouping yes not yet
- use regrouping to solve addition and subtraction questions yes not yet
- use a calculator to check answers yes not yet
- use the inverse operation to check answers yes not yet
- use estimation to determine if an answer is reasonable yes not yet
- choose the correct operation to solve a problem yes not yet

HOME INSTRUCTOR'S COMMENTS
